

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/004082

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H03H9/64

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H03H

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX, IBM-TDB

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1 158 670 A (MATSUSHITA ELECTRIC IND CO LTD) 28 November 2001 (2001-11-28) figures 11,12	1,2,7-13
Y	-----	3,4,6
X	DE 100 25 450 A (EPCOS AG) 29 November 2001 (2001-11-29) figure 3	1,7,9-13
X	----- US 4 647 881 A (MITSUTSUKA SYUICHI) 3 March 1987 (1987-03-03) figure 1	1
Y	----- DE 100 13 861 A (EPCOS AG) 27 September 2001 (2001-09-27) cited in the application figures 1,2,5,6	3,4,6
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

30 March 2005

Date of mailing of the international search report

21 04 2005

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US R E33 957 E (TOYO COMMUNICATION EQUIPMENT AND CO. (JP)) 9 June 1992 (1992-06-09) figures 13,14 -----	1-13
A	DE 198 18 826 A (SIEMENS MATSUSHITA COMPONENTS) 4 November 1999 (1999-11-04) figure 9 -----	3-6

INTERNATIONAL SEARCH REPORT

Intern Application No
PCT/EP2004/004082

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 1158670	A	28-11-2001	EP 1158670 A1	28-11-2001
			US 2002163402 A1	07-11-2002
			CN 1338148 A ,C	27-02-2002
			WO 0143284 A1	14-06-2001
			TW 498614 B	11-08-2002

DE 10025450	A	29-11-2001	DE 10025450 A1	29-11-2001
			WO 0191294 A1	29-11-2001

US 4647881	A	03-03-1987	JP 1642724 C	28-02-1992
			JP 3003411 B	18-01-1991
			JP 61094409 A	13-05-1986
			DE 3539697 A1	14-05-1987
			FR 2590078 A1	15-05-1987
			GB 2182514 A ,B	13-05-1987
			NL 8503103 A	01-06-1987

DE 10013861	A	27-09-2001	DE 10013861 A1	27-09-2001
			CA 2403770 A1	20-09-2002
			CN 1419739 A	21-05-2003
			WO 0171911 A1	27-09-2001
			EP 1269627 A1	02-01-2003
			JP 2003528523 T	24-09-2003
			TW 508905 B	01-11-2002
			US 2003160665 A1	28-08-2003

US RE33957	E	09-06-1992	JP 1865250 C	26-08-1994
			JP 2016613 B	17-04-1990
			JP 59131213 A	28-07-1984
			DE 3382058 D1	24-01-1991
			US 4542356 A	17-09-1985

DE 19818826	A	04-11-1999	DE 19818826 A1	04-11-1999
